

**WO 2004/056860 A3**



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# INTERNATIONAL SEARCH REPORT

International Application No

PCT/GB 03/05605

## A. CLASSIFICATION OF SUBJECT MATTER

IPC 7 C07K14/575 C12N15/00 A61K38/00

According to International Patent Classification (IPC) or to both national classification and IPC

## B. FIELDS SEARCHED

Minimum documentation searched (classification system followed by classification symbols)

IPC 7 C07K

Documentation searched other than minimum documentation to the extent that such documents are included in the fields searched

Electronic data base consulted during the international search (name of data base and, where practical, search terms used)

EPO-Internal, Sequence Search, BIOSIS, PAJ, FSTA, EMBASE, WPI Data

## C. DOCUMENTS CONSIDERED TO BE RELEVANT

Category *	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
X	<p>DATABASE UniProt 'Online!  1 November 1996 (1996-11-01), "Chorionic  somatomammotropin CS-5."  XP002304199  retrieved from EBI accession no.  UNIPROT:Q14406  Database accession no. Q14406  the whole document  -&amp; VNENCAK-JONES C L ET AL: "HOT SPOTS  FOR GROWTH HORMONE GENE DELETIONS IN  HOMOLOGOUS REGIONS OUTSIDE OF ALU REPEATS"  SCIENCE, AMERICAN ASSOCIATION FOR THE  ADVANCEMENT OF SCIENCE,, US,  vol. 250, 21 December 1990 (1990-12-21),  pages 1745-1748, XP002044349  ISSN: 0036-8075</p> <p style="text-align: center;">-----  -/-</p>	1-45

☒ Further documents are listed in the continuation of box C.

☐ Patent family members are listed in annex.

### \* Special categories of cited documents:

"A" document defining the general state of the art which is not considered to be of particular relevance

"E" earlier document but published on or after the international filing date

"L" document which may throw doubts on priority claim(s) or which is cited to establish the publication date of another citation or other special reason (as specified)

"O" document referring to an oral disclosure, use, exhibition or other means

"P" document published prior to the international filing date but later than the priority date claimed

"T" later document published after the international filing date or priority date and not in conflict with the application but cited to understand the principle or theory underlying the invention

"X" document of particular relevance; the claimed invention cannot be considered novel or cannot be considered to involve an inventive step when the document is taken alone

"Y" document of particular relevance; the claimed invention cannot be considered to involve an inventive step when the document is combined with one or more other such documents, such combination being obvious to a person skilled in the art.

"&" document member of the same patent family

Date of the actual completion of the international search

15 November 2004

Date of mailing of the international search report

01/12/2004

Name and mailing address of the ISA

European Patent Office, P.B. 5818 Patentlaan 2  
NL - 2280 HV Rijswijk  
Tel. (+31-70) 340-2040, Tx. 31 651 epo nl,  
Fax: (+31-70) 340-3016

Authorized officer

Turri, M

## INTERNATIONAL SEARCH REPORT

 Int'l Application No  
 PCT/GB 03/05605

## C.(Continuation) DOCUMENTS CONSIDERED TO BE RELEVANT

Category *	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
A	<p>CHEN E Y ET AL: "THE HUMAN GROWTH HORMONE LOCUS: NUCLEOTIDE SEQUENCE, BIOLOGY, AND EVOLUTION"            GENOMICS, ACADEMIC PRESS, SAN DIEGO, US,            vol. 4, no. 4, 1989, pages 479-497,            XP000990095            ISSN: 0888-7543            -&amp; DATABASE GENE BANK            8 November 1994 (1994-11-08),            CHEN E Y ET AL: "HUMAN GROWTH HORMONE (GH-1 AND GH-2) AND CHORIONIC SOMATOMAMMOTROPIN (CS-1, CS-2 AND CS-5) GENES, COMPLETE CDS"            XP002185150            retrieved from GENE BANK            Database accession no. J03071            the whole document</p>	
A	<p>HIRT H ET AL: "THE HUMAN GROWTH HORMONE GENE LOCUS STRUCTURE EVOLUTION AND ALLELIC VARIATIONS"            DNA (NEW YORK),            vol. 6, no. 1, 1987, pages 59-70,            XP009039318            ISSN: 0198-0238            -&amp; DATABASE SWISSPROT            25 October 2004 (2004-10-25), "Chorionic somatomammotropin hormone precursor (Choriomammotropin) (Lactogen)"            XP002304200            retrieved from SWISSPROT            Database accession no. P01243            abstract</p>	
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A	<p>SEEBURG P H: "THE HUMAN GROWTH HORMONE GENE FAMILY NUCLEOTIDE SEQUENCES SHOW RECENT DIVERGENCE AND PREDICT A NEW POLY PEPTIDE HORMONE"            DNA (NEW YORK),            vol. 1, no. 3, 1982, pages 239-250,            XP001058450            ISSN: 0198-0238</p>	
A	<p>LI C H ET AL: "AMINO-ACID SEQUENCE OF HUMAN CHORIONIC SOMATOMAMMOTROPIN"            ARCHIVES OF BIOCHEMISTRY AND BIOPHYSICS,            vol. 155, no. 1, 1973, pages 95-110,            XP009039320            ISSN: 0003-9861</p>	

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# INTERNATIONAL SEARCH REPORT

Int. Application No

PCT/GB 03/05605

## C.(Continuation) DOCUMENTS CONSIDERED TO BE RELEVANT

Category *	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
A	SCHNEIDER A B ET AL: "IDENTIFICATION OF THE INTER CHAIN DI SULFIDE BONDS OF DIMERIC HUMAN PLACENTAL LACTOGEN" JOURNAL OF BIOLOGICAL CHEMISTRY, vol. 254, no. 10, 1979, pages 3782-3787, XP002304196 ISSN: 0021-9258	
A	SHINE J ET AL: "Construction and analysis of recombinant DNA for human chorionic somatomammotropin." NATURE. 8 DEC 1977, vol. 270, no. 5637, 8 December 1977 (1977-12-08), pages 494-499, XP009039351 ISSN: 0028-0836	
A	SHERWOOD L M ET AL: "AMINO-ACID SEQUENCE OF HUMAN PLACENTAL LACTOGEN" NATURE NEW BIOLOGY, vol. 233, no. 36, 1971, pages 59-61, XP009039319 ISSN: 0090-0028	
A	TODA Y ET AL: "Alu elements as an aid in deciphering genome rearrangements." GENE. 31 DEC 1997, vol. 205, no. 1-2, 31 December 1997 (1997-12-31), pages 173-176, XP002304198 ISSN: 0378-1119	
P,A	STRAUSBERG R L ET AL: "Generation and initial analysis of more than 15,000 full-length human and mouse cDNA sequences" PROCEEDINGS OF THE NATIONAL ACADEMY OF SCIENCES OF USA, NATIONAL ACADEMY OF SCIENCE. WASHINGTON, US, vol. 99, no. 26, 24 December 2002 (2002-12-24), pages 16899-16903, XP002964739 ISSN: 0027-8424	
A	SELBY M J ET AL: "ANALYSIS OF A MAJOR HUMAN CHORIONIC SOMATOMAMMOTROPIN GENE EVIDENCE FOR 2 FUNCTIONAL PROMOTER ELEMENTS" JOURNAL OF BIOLOGICAL CHEMISTRY, vol. 259, no. 21, 1984, pages 13131-13138, XP002304204 ISSN: 0021-9258	

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In International Application No  
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## C.(Continuation) DOCUMENTS CONSIDERED TO BE RELEVANT

Category *	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
A	<p>BARRERA-SALDANA H A ET AL: "2 STRUCTURALLY DIFFERENT GENES PRODUCE THE SAME SECRETED HUMAN PLACENTAL LACTOGEN HORMONE" JOURNAL OF BIOLOGICAL CHEMISTRY, vol. 258, no. 6, 1983, pages 3787-3793, XP002304205 ISSN: 0021-9258</p>	
A	<p>BARSH G S ET AL: "The human growth hormone gene family: structure and evolution of the chromosomal locus." NUCLEIC ACIDS RESEARCH. 25 JUN 1983, vol. 11, no. 12, 25 June 1983 (1983-06-25), pages 3939-3958, XP002304206 ISSN: 0305-1048</p>	